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First Release

P20EE (diagnostic troubleshooting code) SOLUTION - NOX CONVERSION EFFICIENCY

Prevost vehicles

B13R (9700 us/can)

DESCRIPTION

For the vehicles **on which a notification** for SP18-35 **exists**, perform the following checklist and operations. It has been determined that these vehicles had the code (DTC) P20EE activated.

DO NOT perform this special bulletin on a specific vehicle unless a notification exists, otherwise, no reimbursement will be awarded.

MODEL YEAR(S) AND VEHICLES INVOLVED

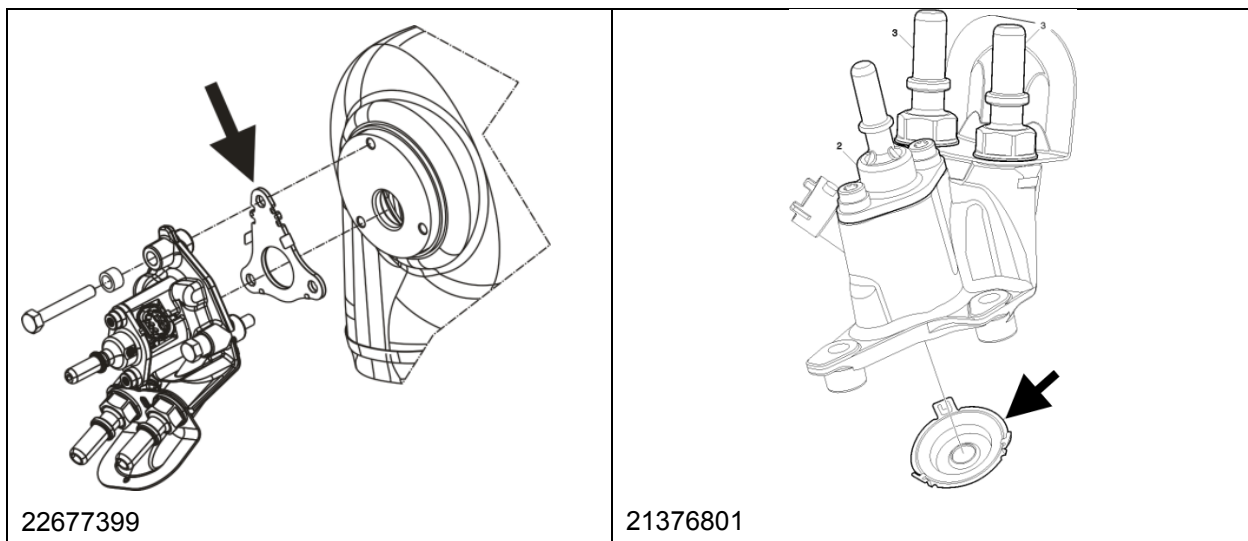
NOTICE TO SERVICE CENTERS <i>Verify vehicle eligibility by checking warranty bulletin status with SAP or via ONLINE WARRANTY SYSTEM available on Service / Warranty tab of Prevost website.</i>	
H3-41, H3-45 coaches Model Year : 2017 - 2019	<u>GHG17</u> or <u>OBD18</u> compliant vehicles From 2PCH33494 <u>HC713735</u> up to 2PCH33492 <u>KC710467</u> (not incl.)
H3-45 VIP motorhomes Model Year : 2017 - 2019	
X3-45 coaches Model Year : 2017 - 2019	<u>GHG17</u> or <u>OBD18</u> compliant vehicles From 4RKG33491 <u>H9737417</u> up to 4RKG33490 <u>K9737576</u> (not incl.)
X3-45 coaches Model Year : 2017 - 2019	<u>GHG17</u> or <u>OBD18</u> compliant vehicles From 2PCCS3495 <u>HC736180</u> up to 2PCCS3498 <u>KC736407</u> (not incl.)
X3-45 VIP commercial use Model Year : 2017 - 2019	
X3-45 VIP motorhomes Model Year : 2017 - 2019	
VOLVO 9700 Model Year : 2017 - 2019	<u>GHG17</u> or <u>OBD18</u> compliant vehicles From 3CET2V927 <u>H5184392</u> up to 3CET2V926 <u>K5194709</u> incl.

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MATERIAL

Part required

Part No.	Description	Qty
22677399	GASKET, DEF INJECTION NOZZLE	1
21376801	SEALING PLATE	1



NOTE

Material can be obtained through regular channels.



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DANGER

Park vehicle safely, apply parking brake, stop the engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

IMPORTANT NOTES

-  DO NOT perform WB18-04 or WB18-84 EMS & ACM SOFTWARE UPDATE before the following checklist, otherwise useful diagnostic codes and monitor data could be erased.
Wb18-04 for Prevost coaches, Wb18-84 for Volvo 9700
-  Any troubleshooting labor of active DTCs (Diagnostic Troubleshooting Codes) other than P20EE is considered as a separate operation of the RO (repair order) and cannot be charged to this special bulletin.

PROCEDURE

Vehicle identification		
H3	<input type="checkbox"/>	V.I.N (short) : _ _ - _ _ _ _ _
X3	<input type="checkbox"/>	

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OPERATIONS TO BE PERFORMED IN ADVANCE BY THE SERVICE ADVISOR

Ask the customer whether he/she noticed an abnormal consumption of oil or coolant.

Search all relevant information concerning the aftertreatment system or severe turbo failure in the history of repairs of the vehicle and record. Attach to the repair order.

Also check if SP18-35 has already been performed on that particular coach. If this is the case, do not perform SP18-35 once again, contact the Technical Publications for instructions. You can send a message to the Technical Publications functional mailbox: technicalpublications_Prev@volvo.com

NOTE/DETAILS:

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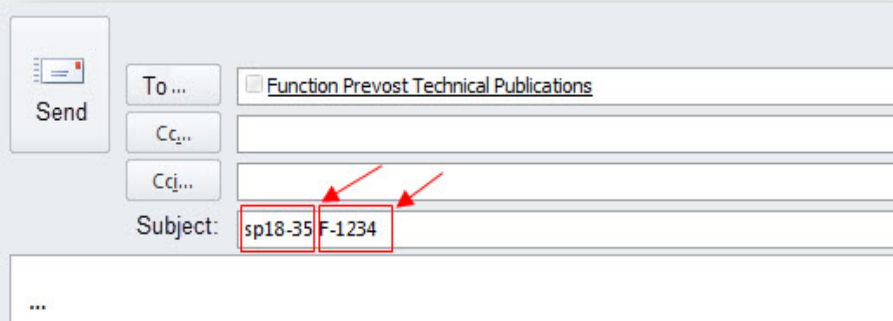
#	checklist	PASS OR FAIL		INITIALS AND DATE
		P	F	
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
1	<p>Confirm your PTT software is up to date, see www.premiumtechtool.com . Connect PTT and check the diagnostic codes related to EMS and ACM. Take a screenshot of the DTCs and attach to the repair order.</p> <p>Confirm that code P20EE is present (whether active or inactive). If P20EE is <u>not</u> present, do not continue with this checklist.</p>			
NOTE/DETAILS:				
2	<p>Take a screenshot of the last SCR efficiency evaluation (Test screen 2589-08-03-05), attach to the repair order.</p>			
NOTE/DETAILS:				
3	<p>Check if there are leaks at the Charge Air Cooler (soapy water test). Check if there are leaks of EGR, exhaust gas (between turbo and SCR converter). Note any presence of soot. Any repair is considered as a separate operation of the RO (repair order) and cannot be charged to this special bulletin.</p> <p>Note: Try to clear exhaust clamps while keeping in mind the state of the insulating blankets to avoid damage because the heat can make them fragile over time.</p>			
NOTE/DETAILS:				
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4	Remove DEF doser and perform all dosing amount tests (Test screen 2589-08-03-05) and record the results.			
NOTE/DETAILS:				
5	Test the concentration of DEF and record the result. Tool: refractometer # 88890105.			
NOTE/DETAILS:				
6	Check inside the flex pipe downstream of the DEF injector for any accumulation of DEF crystals, attach pictures of crystal accumulations if applicable. Remove any crystal accumulation if applicable. If the situation is normal (PASS) reinstall the DEF injector with two new seals.			
NOTE/DETAILS:				
7	Check if dashboard REGENERATION REQUEST telltale is illuminated. If not, go to step 8. If illuminated, check which type of regeneration is requested (Test screen 2589-08-03-02) by EMS (marked with a blue circle). For any regeneration request different than Sulfur Regeneration, perform the requested regeneration type before proceeding to step 8.			
NOTE/DETAILS:				
8	Perform <u>one</u> Sulfur Regeneration (Test screen 2589-08-03-02).			
NOTE/DETAILS:				
9	Do a test drive of at least 1 hour to 1 ½ hour at highway speed (45 minutes in each direction).			
NOTE/DETAILS:				
10	Connect PTT and take a screen shot of the last four (4) SCR efficiency evaluations (Test screen 2589-08-03-05). a) Make sure that the EMS has been able to carry out a new evaluation (see example below showing the latest evaluation on top of the previous evaluations). b) If SCR efficiency value on the most recent evaluation is >85% vehicle may be released (Typical new SCR is expected to get >90% SCR efficiency). This special bulletin can then be closed. Please, attach this filled checklist to the repair order in SAP. c) Authorization for the replacement of the SCR converter . If SCR efficiency value is less than 85%, an analysis of this checklist with the notes/results must			

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be done in order to allow the replacement of the SCR converter. Scan and send this checklist and all the relevant documents, photos, etc. to the Technical Publications functional mailbox: technicalpublications_Prev@volvo.com

Please indicate in the "subject line": SP18-35 and the short V.I.N. as in the example below...



NOTE/DETAILS:

Example of SCR performance test

Before the road test	After the road test (most recent evaluation=105%)																								
<p>DTC P20EE or P103C</p> <p>Test Values - NOx/SCR Monitor Data</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">80 %</td><td>Minimum fault limit</td></tr> <tr><td style="text-align: center;">91 %</td><td>Evaluation (Most recent)</td></tr> <tr><td style="text-align: center;">80 %</td><td>Evaluation 2</td></tr> <tr><td style="text-align: center;">81 %</td><td>Evaluation 3</td></tr> <tr><td style="text-align: center;">80 %</td><td>Evaluation 4</td></tr> <tr><td style="text-align: center;">81 %</td><td>Evaluation (Oldest)</td></tr> </table>	80 %	Minimum fault limit	91 %	Evaluation (Most recent)	80 %	Evaluation 2	81 %	Evaluation 3	80 %	Evaluation 4	81 %	Evaluation (Oldest)	<p>DTC P20EE or P103C</p> <p>Test Values - NOx/SCR Monitor Data</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">80 %</td><td>Minimum fault limit</td></tr> <tr style="border: 2px solid red;"><td style="text-align: center;">105 %</td><td>Evaluation (Most recent)</td></tr> <tr><td style="text-align: center;">91 %</td><td>Evaluation 2</td></tr> <tr><td style="text-align: center;">80 %</td><td>Evaluation 3</td></tr> <tr><td style="text-align: center;">81 %</td><td>Evaluation 4</td></tr> <tr><td style="text-align: center;">80 %</td><td>Evaluation (Oldest)</td></tr> </table>	80 %	Minimum fault limit	105 %	Evaluation (Most recent)	91 %	Evaluation 2	80 %	Evaluation 3	81 %	Evaluation 4	80 %	Evaluation (Oldest)
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ADDITIONAL NOTES/DETAILS:

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PARTS / WASTE DISPOSAL

Discard waste according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

ESTIMATED TIME

The time required to perform this special bulletin is between 4 & 5 ¾ hours.

OTHER

VBC Bulletin	N/A
Fail Code	04.04-1
Defect Code	g
Syst. Cond	B
Causal Part	21970125

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